## REMARKS

Status of the Claims

Claims 24-28 are currently pending in the present application. Claims 1-23 have been canceled. Claims 24-27 are directed to the same inventions as claims 11-18. Claim 28, directed to a separate invention is withdrawn from consideration. Claims 24-27 are currently under examination.

Withdrawn Claims

Applicants respectfully point out that under MPEP 821.04, once a product claim is found allowable, withdrawn process claims which depend from or otherwise include the limitations of the allowable product claim will be rejoined. Claim 26 is directed to a product, and claim 28 is directed to a method of using the product of claim 26. Thus, once claim 26 is found allowable, claim 28 should be rejoined.

Moreover, MPEP 809.03 states that linking claims if allowed act to prevent restriction between inventions that can otherwise be shown to be divisible. Examples of linking claims include a claim to a product linking a process of making or using a product. Claim 26 is directed to a product, and claim 28 is directed to a process of using the product of claim 26. Thus, once claim 26 is found allowable, claims 28 which are linked to claim 26 must be rejoined and examined.

Amendments to the Claims

New claims 24-28 do not introduce prohibited new matter. The new claims provide specific embodiments of the claimed invention. Support for the new claims is summarized in the Table below.

| Claim | Support |
|---|---|
| 24 | Original claim 11 and claim 14 |

| | |
|---|---|
| 25 | Original claim 15 |
| 26 | Original claim 17 |
| 27 | Original claim 18 |
| 28 | Original claim 19 |

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 11 and 13-18 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 13-18 have been canceled and replaced with new claims 24-27. The rejection of claims 11 and 13-18 is not applicable to new claims 24-27. These new claims do not contain the language that the Office Action rejected as rendering claims 11 and 13-18 indefinite.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 11 and 13-18 are rejected under 35 U.S.C. § 112, first paragraph, as being enabling only for a method of producing a protein of interest comprising transforming a mutant *L. lactis* bacterium . . . ."

Claims 11 and 13-18 have been canceled and replaced with claims 24-27. Claims 24-27 are directed to a *Lactococcus lactis* bacterial strain, wherein the *htrA* gene has been mutated so that said strain does not express a functional HtrA protease and a method of producing a protein of interest comprising introducing into the bacterial strain a nucleic acid encoding the protein of interest and culturing the bacterial strain under conditions that would allow expression of the protein.

The Office Action asserts that the specification does not enable a method of producing a protein of interest by culturing a mutated Gram positive bacterial strain of the *Streptococcaceae* genus. Claims 24-27 do not encompass a method of producing a protein of interest comprising culturing a mutated bacterial strain of the *Streptococcaceae* genus. Moreover, the Office Action

states that the specification provides enablement and support for methods of using a mutated bacterial strain of the *Lactococcus* genus which does not express a functional HtrA protease (pages 7-8). Accordingly, the invention of claims 24-27 are enabled by the specification. Applicants respectfully request withdrawal of the rejection.

Rejection of the Claims Under 35 U.S.C. § 102(b)

Claims 11, 13-16, 17, and 18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Vos *et al.*

Claims 11, 13-16, 17, and 18 have been cancelled and replaced with claims 24-27. As discussed above, claims 24-27 are directed to a *Lactococcus lactis* bacterial strain, wherein the *htrA* gene has been mutated so that said strain does not express a functional HtrA protease and a method of producing a protein of interest comprising introducing into the bacterial strain a nucleic acid encoding the protein of interest and culturing the bacterial strain under conditions that would allow expression of the protein.

The Office Action states that Vos *et al.* disclose a method of producing a protein of interest comprising culturing *Lactobacillus sp.*, which do not express a functional HtrA protease and recovering said protein exported by said strain in the culture medium. Applicants respectfully point out that Vos *et al.* do not disclose a bacterial strain that meet the limitations of the claims. The *L. lactis* bacterial strain disclosed by Vos *et al.* is *L. lactis* MG1363 which is a plasmid free strain (page 4, lines 11-14 of WO 91/02064). It is devoid of the PrtP protease since the PrtP protease is a plasmid encoded protein. However, it is not devoid of the HtrA protease, because the lactococcal chromosome encodes the HtrA protease (page 10, lines 37 of the specification). The enclosed reference of Miyoshi *et al.* confirms that the HtrA protease is expressed as a functional protease by the *L. lactis* MG1363 strain of Vos *et al.* Miyoshi *et al.* teach inactivation of the *htrA* protease gene by a single crossover recombination event using a nonreplicative plasmid harboring an internal fragment of the MG1363 *htrA* gene (see abstract and page 3141, right column). As summarized in Table 1 (page 3142), the resulting *L. lactis* *htrA*-NZ9000 bacterial strain of Miyoshi *et al.* differs from *L. lactis* MG1363 of Vos *et al.* only in the disrupted *htrA* gene resulting from a single crossover recombination and the insertion of the *nisRK* genes. Accordingly, the HtrA protease is expressed by *L. lactis* MG1363 of Vos *et al.*

and is a functional protease.

The Office Action states that the *L. lactis* of Vos *et al.* is transformed with expression vectors comprising mutant proteases which meet the limitations of the claims. Applicants respectfully point out that Vos *et al.* disclose expression of mutant PrtP proteases in *L. lactis*. The mutant PrtP proteases do not belong to the HtrA family. HtraA proteases are well known in the art. Pallen and Wren characterized the structure of HtrA proteases as comprising a catalytic site of serine proteases related to trypsin (see page 5, lines 15-25, of the specification). Moreover, the specification on page 8, lines 6-21, defines "HtrA protease" as "any serine protease of the trypsin type." However, the mutant PrtP proteases of Vos *et al.* are serine proteases of the subtilisin type (see page 2, lines 27-30). Thus, Vos *et al.* do not disclose a method of producing a protein of interest comprising culturing a *Lactococcus lactis* bacterial strain which does not express a functional HtrA protease.

Accordingly, the cited reference does not teach the claimed invention, and therefore does not anticipate the claims. Applicants respectfully request withdrawal of the rejection.

**CONCLUSION**

The foregoing amendments and remarks are being made to place the application in condition for allowance. Applicants respectfully request entry of the amendments, reconsideration, and the timely allowance of the pending claims. A favorable action is awaited. Should the Examiner find that an interview would be helpful to further prosecution of this application, they are invited to telephone the undersigned at their convenience.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **Constructive Petition for Extension of Time** in accordance with 37 C.F.R. 1.136(a)(3).

Respectfully submitted,
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